



State of Utah

Department of  
Environmental Quality

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Executive Director

DIVISION OF WATER QUALITY  
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Lieutenant Governor

RECEIVED

OCT 18 2005

DIV. OF OIL, GAS & MINING

October 14, 2005

cc: Paul  
5/10/1059

Mr. Page van Loben Sels  
Earth Energy Resources, Inc.  
8013-110 Street  
Grande Prairie A.B. T8W 6T2  
Canada

Subject: Oil Extraction from Oil Sands – Spent Tar Sands

Dear Mr. van Loben Sels:

I have reviewed information on Earth Energy Resources' plan for a pilot project to extract oil from tar sands. The information provided does not include the cumulative amount of tar sand to be processed, a proposal for tailings disposal or an estimate of the chemical quality of leachate that may result from precipitation that infiltrates oil sand tailings after disposal. Petroleum-related hydrocarbons would be the contaminants of concern in this case. There is also no information on hydrogeologic characteristics of the proposed disposal site

Lacking this information, we must treat this as a worst-case scenario, and the tailings should be managed in such a way that leachate does not form after final tailings disposal. You may temporarily store the tailings on an impermeable liner, but precipitation that comes in contact with the tailings must be managed to prevent contamination of ground or surface water.

Additional information on the composition of leachate from the tailings, disposal site conditions or proposed containment technology for tailings disposal could be used to justify disposal requirements that are less stringent.

Please contact me if you have any questions.

Sincerely,

Mark Novak, P.G.  
Ground Water Protection Section

cc: Dave Ariotti, District Engineer  
Tri-County Health Dept.  
Susan White, DOGM  
Kiran Bhayani

MNOVAK/WP/EARTHENRES.LTR